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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/760,220

01/21/2004

Kia Silverbrook

SMA07US

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SILVERBROOK RESEARCH PTY LTD  
393 DARLING STREET  
BALMAIN, 2041  
AUSTRALIA

EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/760,220	<b>Applicant(s)</b> SILVERBROOK ET AL.	
	<b>Examiner</b> LAURA E. MARTIN	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 3,6-8 and 14-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,9-13,24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/3/04</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

Acknowledgement is made of the information disclosure statement (IDS) submitted on 3 November 2004. The submission is in compliance with the provisions of 37 CFR 1.97.

### ***Specification***

The abstract of the disclosure is objected to because it contains forms of the word "comprising". Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: the cross-reference data on pages 1 and 2 must be supplied with the US serial numbers.

Appropriate correction is required.

### ***Election/Restrictions***

Applicant's election without traverse of claims 1, 2, 4, 5, 9-13, 24, and 25 in the reply filed on 1/20/08 is acknowledged.

### ***Double Patenting***

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/760237 in view of Silverbrook et al. (US 6443555 B1).

10/760220	10/760237
A photofinishing system comprising a support structure, a processor and a printer mounted to the support structure, a cartridge containing a roll of print media arranged in use to be mounted removably to the support structure, print media feed means located in the cartridge, and drive means mounted to the support structure and arranged to couple with the print media feed means, when the cartridge is mounted to the support structure, and to effect feeding of the print media through the printer, the processor being arranged to generate a printer drive signal that is representative of a photographic image, and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer from the cartridge.	A photofinishing system comprising a processor, a printer, means for feeding print media to the printer from a roll of the print media, and drier means coupled to the printer; the processor being arranged to generate a drive signal that is representative of a photographic image, the printer being coupled to the processor and being arranged to process the drive signal and effect printing of the photographic image on the print media, and the drier means being arranged to receive printed media directly from the printer, to transport the printed media from the printer and, in use, to effect drying of the printed media during transportation of the media.

10/760237 does not teach a support structure.

Silverbrook et al. discloses a support structure (figure 1, element 43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the photofinishing system taught in 10/760237 with the support structure taught by Silverbrook et al. because it is well known to have a casing

supporting the printer and paper. This protects the image being printed as well as the printing components.

This is a provisional obviousness-type double patenting rejection.

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/760252 in view of Koike et al. (US 2002/0192003 A1).

10/760220	10/760252
A photofinishing system comprising a support structure, a processor and a printer mounted to the support structure, a cartridge containing a roll of print media arranged in use to be mounted removably to the support structure, print media feed means located in the cartridge, and drive means mounted to the support structure and arranged to couple with the print media feed means, when the cartridge is mounted to the support structure, and to effect feeding of the print media through the printer, the processor being arranged to generate a printer drive signal that is representative of a photographic image, and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer from the cartridge.	A digital photofinishing system comprising a digital processor, a printer and means for feeding print media to the printer from a roll of the print media, the digital processor being arranged to receive digitised data that is representative of a photographic image and to process the data in a manner to generate a printer drive signal that is representative of the photographic image, the printer being coupled to the digital processor and arranged to process the drive signal and effect page-width printing of the photographic image on the print media as it is fed directly to the printer from the roll, and the printer incorporating at least one print head assembly that is arranged to provide for printing of the print media with a feed rate up to 2 metres per second.

10/760252 does not teach a support structure.

Silverbrook et al. discloses a support structure (figure 1, element 43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the photofinishing system taught in 10/760252 with the support structure taught by Silverbrook et al. because it is well known to have a casing supporting the printer and paper. This protects the image being printed as well as the printing components.

This is a provisional obviousness-type double patenting rejection.

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/760180 in view of Koike et al. (US 2002/0192003 A1).

10/760220	10/7602180
A photofinishing system comprising a support structure, a processor and a printer mounted to the support structure, a cartridge containing a roll of print media arranged in use to be mounted removably to the support structure, print media feed means located in the cartridge, and drive means mounted to the support structure and arranged to couple with the print media feed means, when the cartridge is mounted to the support structure, and to effect feeding of the print media through the printer, the processor being arranged to generate a printer drive signal that is representative of a photographic image, and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer	A digital photofinishing system comprising a digital processor, a printer and means for feeding print media to the printer from a roll of the print media; the digital processor being arranged to receive digitised data that is representative of a photographic image and to process the data in a manner to generate a printer drive signal that is representative of the photographic image, and the printer being coupled to the digital processor and being arranged to process the drive signal and effect page-width printing of the photographic image on the print media as it is fed to and through the printer from the roll.

from the cartridge.	
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10/760180 does not teach a support structure.

Silverbrook et al. discloses a support structure (figure 1, element 43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the photofinishing system taught in 10/760180 with the support structure taught by Silverbrook et al. because it is well known to have a casing supporting the printer and paper. This protects the image being printed as well as the printing components.

This is a provisional obviousness-type double patenting rejection.

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No 7002664 B1 in view of Koike et al. (US 2002/0192003 A1).

10/760220	US 7002664 B1
A photofinishing system comprising a support structure, a processor and a printer mounted to the support structure, a cartridge containing a roll of print media arranged in use to be mounted removably to the support structure, print media feed means located in the cartridge, and drive means mounted to the support structure and arranged to couple with the print media feed means, when the cartridge is mounted to the support structure, and to effect feeding of the print media through the printer, the processor being arranged	Photofinishing system comprising: a) a digital processor, a printer and means for feeding print media to the printer from a roll of the print media; the digital processor being arranged to receive digitised data that is representative of a photographic image and to process the data in a manner to generate a printer drive signal that is representative of the photographic image, the printer being coupled to the digital processor and being arranged to process the drive signal and effect printing of the photographic image on the print media as

to generate a printer drive signal that is representative of a photographic image, and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer from the cartridge.	it is fed to the printer from the roll, and provided as an integrated component of the photofinishing system, and b) means for providing controlled chemical development and subsequent printing of exposed photographic film, c) a slitter means located in series with the printer, the slitter means being arranged to receive printed media following its passage through the printer, to transport the printed media in a longitudinal direction away from the printer and to slit the printed media in the longitudinal direction of transportation of the printed media, the slitter means comprising: a) guide rollers for transporting the print media through the slitter means, b) spaced-apart slitting blades mounted on rotatable shafts, and c) a rotatable, selectively positional turret supporting the rotatable shafts.
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US 7002664 B1 does not teach a support structure.

Silverbrook et al. discloses a support structure (figure 1, element 43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the photofinishing system taught in US 7002664 B1 with the support structure taught by Silverbrook et al. because it is well known to have a casing supporting the printer and paper. This protects the image being printed as well as the printing components.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6443555 B1) in view of Koike et al. (US 2002/0192003 A).

**Silverbrook et al. disclose the following claim limitations:**

As per claim 1: a support structure (figure 1, element 43), a printer mounted to the support structure, (figure 1, inside element 56), a cartridge containing a roll of print media (figure 12, elements 40 and 41; figure 11, element 42) located in the cartridge, and drive means (figure 14, element 44) mounted to the support structure and arranged to couple with the print media feed means (column 7, lines 31-46), when the cartridge is mounted on the support structure and to effect feeding of the print media through the printer.

As per claim 4: at least one printing fluid is provided for the printer by way of at least one replaceable printing fluid (column 6, lines 18-24).

As per claim 9: the printer comprises at least one print head assembly (column 6, lines 18-24).

As per claim 10: the printer comprises two confronting, spaced-apart print head assemblies (column 6, lines 18-24).

As per claim 11: the print head assemblies are arranged selectively to direct printing fluid onto at least one face of print media from the roll of print media (column 6, lines 18-24).

**Silverbrook et al. do not disclose the following claim limitations:**

As per claim 1: a processor being arranged o generate a printer drive signal that is representative of a photographic image and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer from the cartridge.

As per claim 2: the processor comprises a digital processor which is arranged to receive digitised data that is representative of a photographic image and to process the data in a manner to generate a printer drive signal that is representative of the photographic image, and the printer is arranged to process the drive signal and effect page-width printing of the photographic image on the print media as it is fed directly to the printer from the roll.

**Koike et al. disclose the following claim limitations:**

As per claim 1: a processor being arranged o generate a printer drive signal that is representative of a photographic image and the printer being coupled to the processor and arranged to process the drive signal and effect printing of the photographic image on the print media as the print media is fed through the printer from the cartridge (figure 1, element 42 - it is inherent that a processor in a printer is a digital processor).

As per claim 2: the processor comprises a digital processor which is arranged to receive digitised data that is representative of a photographic image and to process the data in a manner to generate a printer drive signal that is representative of the

photographic image, and the printer is arranged to process the drive signal and effect page-width printing of the photographic image on the print media as it is fed directly to the printer from the roll (figure 2, element 46) and [0109] – [0110].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing system taught by Silverbrook et al. with the processor taught by Koike et al. in order to more efficiently use the printing system. It is well known in the art that processors are used in printing apparatuses.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6443555 B1) and Koike et al. (US 2002/0192003 A), and further in view of Silverbrook (US 6238044 B1).

**Silverbrook et al. as modified disclose the following claim limitations:**

As per claim 5: the printing system of claim 1.

**Silverbrook et al. as modified do not disclose the following claim limitations:**

As per claim 5: at least one refillable secondary cartridge carried by the cartridge, the secondary cartridge containing printing ink to be delivered to the printer.

**Silverbrook (044) discloses the following claim limitations:**

As per claim 5: at least one refillable secondary cartridge carried by the cartridge, the secondary cartridge containing printing ink to be delivered to the printer (figure 3, element 58; figure 2, element 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing system taught by Silverbrook et al. as modified with the

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secondary cartridge taught by Silverbrook (044) in order to efficiently provide ink. It is well known in the art that printers can contain different means for storing ink.

Claims 12, 13, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6443555 B1) and Koike et al. (US 2002/0192003 A), and further in view of Silverbrook (US 6439908 B1).

**Silverbrook et al. as modified disclose the following claim limitations:**

As per claims 12, 13, 24, and 25: the printing system of claim 1.

As per claim 12: each print head assembly comprises at least one print head module, each of which comprises a unitary arrangement of: a support member (figure 17, element 8), and at least four micro-electromechanical integrated circuit print head chips, each of which has a plurality of nozzles to and from which the printing fluid is delivered (figure 15, element 1).

As per claim 13: at least one print head module is removably located in a channel portion of a casing (figure 5, element 12)

**Silverbrook et al. as modified do not disclose the following claim limitations:**

As per claim 12: a fluid distribution arrangement mounting each of the printhead chips to the support member, and a connector for connecting electrical power and signals to each of the printhead chips.

As per claim 13: the casing contains electrical circuitry for controlling the delivery of electrical power and drive signals to the printhead chips by way of the connector.

As per claim 25: the printhead assembly has a width within the range of 150 to 1250 mm and printhead chips numbering between 8 and 64.

**Silverbrook (908) disclose the following claim limitations:**

As per claim 12: a fluid distribution arrangement mounting each of the printhead chips to the support member (figure 2, element 16), and a connector for connecting electrical power and signals to each of the printhead chips (figure 8, element 48 or figure 2, elements 58 and 60 and figure 6, element 54).

As per claim 13: the casing contains electrical circuitry for controlling the delivery of electrical power and drive signals to the printhead chips by way of the connector (figure 3, elements 66 and 54).

As per claim 25: the printhead assembly has a width within the range of 150 to 1250 mm and printhead chips numbering between 8 and 64 (column 2, lines 34-61 and column 6, lines 12-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Silverbrook et al. as modified with the electrical system of Silverbrook (908) in order to more effectively control the printing system.

As per claim 24: Silverbrook et al. as modified disclose the following claimed limitation except for the printhead assembly is arranged to effect printing of the print media with a feed rate of up to 2 meters per second. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the feed rate in order to improve image quality and reduce streaking, since it has been held that

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where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA E. MARTIN whose telephone number is (571)272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. E. M./  
Laura E. Martin

/Manish S. Shah/  
Primary Examiner, Art Unit 2853